



**DIRECTOR OF ENGINEERING REPORT**

**Sept 15, 2021**

District Engineering manages projects, consultants, contractors, and equipment suppliers. Consultant reports and Project Managers reports are included in this section along with details regarding the status of the associated study, design, or construction projects.

**ACTIVE PROJECTS**

**20-07 Digester Complex Improvements:**

SCOPE: The Digester #3 floating cover and the face brick on all four digester tanks is being replaced.						
Contractor: Christy-Foltz			R.E. Inspector: SDD/W Gray - Donohue			
Engineer: Donohue and Associates						
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Scheduled Completion
11/17/20	12/01/20	12/22/20	02/17/21	03/18/21	03/18/21	360 Substantial 390 Final
Submittals Reviewed: 6 complete /0 open						
Requests for Information (RFIs): 6 complete /0 open						
Owner Requests for Proposal/Change Order (RFPCO): 2 complete / 3 open						

**Key Activities:** Digester #2 siding was completed this period and the digester has be placed back into service.

Digester #3 cover is completely removed, cold joint patching of the concrete is complete and the contractor has started installation of the insulation panels.

Digester #4 is offline and contents are being pumped out.

**Issues:** Submittal from Westech (floating cover supplier) was received and rejected again this last period. The issues have been reviewed with the contractor and manufacturer. A submittal without exceptions is expected by 9/17/21.

As the district began removing the contents from digester #4 the pumps shut down with the contents at an elevation much higher than expected. Staff has brought the mixer back on-line to try and thin the contents out to enable operations to attempt to empty the digester again. That process is ongoing.

**Changes:**

1. WCD 01: Additional Pump Down of Digester Contents: Contract documents required SDD to bring digester liquid elevation down to 593.0. Digester 3 quit pumping down at 595.33 and Digester #2 at 595.8. Contractor was put on time and material for the additional pumping required. \$ 31,668.00
2. There are several locations inside digesters 2 and 3 that the coating has cracked/blistered. These sections will need to be repaired. This is outside the scope of the contract and any work on it will be an extra. \$ T&M
3. Digester cold joint repair. District issued T&M directive to remove damaged concrete, prepare the leaking concrete seam, and install Xypex patch along the cold joint in the concrete walls. \$ T&M

**20-01 Lake Shore Drive PS Replacement:**

SCOPE: The lift station is being reconfigured with submersible pumps.						
Contractor: Christy-Foltz			R.E. Inspector: SDD/ J Edenburn - CDI			
Engineer: Clark Dietz Engineers, Inc						
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Scheduled Completion
12/02/20	01/05/21	02/03/21	03/24/21	04/07/21	04/07/21	360 Substantial 390 Final
Submittals Reviewed: 38 received / 38 completed / 12 Rejected						
Requests for Information (RFIs): 1 submitted/1 completed						
Owner Requests for Proposal/Change Order (RFPCO): 1 Issued/1 Completed						
Change Orders: 1 completed						

**Key Activities:** Site work has begun.

A field order was issued this month directing the contractor to live tap the 30-inch force main in two locations to allow installation of valves for connecting the new pump station discharge and the gravity sewer bypass.

**Issues:** There is still no approved schedule for this project and there is some risk that contractor is falling far enough behind that schedule will not be met by substantial completion date.

**20-01 South Shores Sewer Rehab:**

SCOPE: CIPP lining of approximately 17,700 LF of sewer, tie-in connections and approximately 700 vertical feet of cementitious manhole restoration.						
Contractor: SAK Construction			Engineer: Farnsworth Group, Inc			
Advertise	Pre-bid	Bid Open	Intent Award Final Award	Notice to Proceed	Pre-Construction	Scheduled Completion
12/15/20	02/02/21	03/02/21	03/17/21 05/26/21	06/21/21	06/15/21	270 Substantial 300 Final
Submittals Reviewed: 4 received / 0 outstanding						
Requests for Information (RFIs): none						
Owner Requests for Proposal/Change Order (RFPCO): none						

**Key Activities:** Contractor is continuing sewer cleaning operations. CIPP lining operations have begun just west of US route 51 and will continue westward to the St Louis Bridge pump station.

Contractor is mobilizing a second crew on 9/13/21 to start CIPP lining of smaller tributary sewers in the Shoreline/Franzy Drive area.

**20-15 Hatch Replacement:**

SCOPE: The Sanitary District has a working hatch replacement asset management plan. This project includes various hatch replacements needed to implement that plan.						
Contractor: Burdick Plumbing and Heating			Engineer: SDD			
Advertise	Pre-bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Scheduled Completion
11/20/20	12/03/20	02/04/21	02/17/21	03/11/21	08/09/21	140 days
Submittals Reviewed: 9 submitted / 9 completed						
Requests for Information (RFIs): 1 submitted / 1 completed.						
Owner Requests for Proposal/Change Order (RFPCO):						

**Key Activities:** All hatch installations were completed this period. There are a couple of additional bollards being placed close to the emergency bypass hatches that remain to be installed. Expect that to be completed in the next period.

**20-19 Wyckles Facility Sludge Inlet Repairs:**

SCOPE: Scope of work includes the removal of existing lagoon chutes that have collapsed and reinstalling chutes incorporating a shotcrete blanket to bridge the void left by removing the chute below the discharge.						
Contractor: Christy Foltz				Engineer: SDD		
Advertise	Pre-Bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Scheduled Completion
01/22/21	03/04/21	04/15/21	04/22/21	05/03/21	05/13/21	90 days

**Key Activities:** All work is complete for this project. Staff is waiting for final change order paperwork to be submitted from the contractor before closing this project.

**Changes:**

1. Field Order was issued to contractor to relocate drain lines that were found to be installed at an elevation lower than the plans. The work was done on a T&M basis. \$ (TBD)
2. A small section of Revetment Mat was noted deficient during an IEPA inspection to the Wyckles facility. In response to that deficiency, staff authorized the removal of the revetment mat at that location and reinstalled an equivalent, broom finish concrete mat it its place. The work was done on a T&M basis. \$ (TBD)

**20-13 Grit Drying Bed Upgrades:**

SCOPE: Scope of work includes the removal of existing concrete structure and installation of a 50'x60' grit drying structure with bin blocks and site drainage upgrades.						
Contractor: Christy Foltz				Engineer: SDD		
Advertise	Pre-Bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Scheduled Completion
03/10/21	03/24/21	04/15/21	04/22/21	05/03/21	05/13/21	90 days
Submittals Reviewed: 5 submitted / 0 outstanding. Requests for Information (RFIs): 0 submitted Owner Requests for Proposal/Change Order (RFPCO): 0 requested						

**Key Activities:** All but 5 precast panels have arrived on site and have been installed. There are a series of concrete blocks that are to be placed on top of the drying pad that are scheduled to arrive the week of 9/18/21 along with the balance of the precast slabs.

**Issues:** The SE corner pad as installed does not align with existing curbing. Contractor has been directed to remove and adjust elevation.

**20-08 Roof Rehabilitation Project:**

<p><b>SCOPE:</b> Each year the SDD Asset Management Program plans for rehabilitation on roofing systems on the district facilities. Of the 16 roofs inspected, 10 require attention. The scope includes replacement of existing roofing system of Bldg. 871 (well house) at Wyckles Facility. The balance of the 9 roofs is for application of coatings on buildings 870 &amp; 872 (Wyckles Facility), 860 (St. Louis Bridge Pump Station), 584 (Oakland Avenue C.S.O. Facility), 526 (7th Ward C.S.O.), 502 (McKinley Avenue C.S.O.), and 557, 559, 561 (Lincoln Park C.S.O.).</p>						
Contractor: TBD				Engineer: SDD		
Advertise	Pre-Bid	Bid Open	Final Award	Notice to Proceed	Pre-Construction	Scheduled Completion
03/30/21	04/13/21	05/11/21	06/16/21	08/04/21	08/04/21	120 days

**Key Activities:** Material has been purchased and SDD expects the contract work to begin on Sept 13, 2021.

**NON-CONSTRUCTION ACTIVITY**

**ADMINISTRATIVE OFFICE MASTER PLANNING:**

Update: A final draft of Phase 2 report is attached. Architectural Expressions is expected to be available at the trustee meeting to review the document and address questions. After that review, staff is seeking concurrence to proceed onto Phase 3 (see description below).

Phase 1 – Current State facility assessment looked at the condition and costs to maintain existing administrative infrastructure.

Phase 2 – Space Needs and Building Utilization was to assess the current space available, evaluate the utilization of that space and calculate the raw space required based on industry standards.

Phase 3 - (\$10,000) of this facility assessment will follow trustee review of Ph 2 and concurrence to proceed. Phase 3 is to perform a pre-design level study ranging from modifications and upgrades to the existing facilities to the possibility of a new facility, based on the space needs that were identified in Phase 2. The study includes a high-level cost opinion that provides context for the findings from Phase 1 and 2. A review of the existing lab space as a standalone structure is also included in Phase 3.

**SERVICE EXTENSION:**

*Under the consent agenda, there is a Non-Continuous Service Agreement for trustee consideration. This property is a 43.64 acre tract that is located south Hospitality Lane. The address is 4250 N Commerical Crossing, where the company is building a 635,000 SF warehouse. The annexation fee has been paid.*



**PLANNING: NUTRIENT REMOVAL**

Staff issued the request for qualifications (RFQ) for firms qualified and interested in performing Program Manager (PM) services to the Sanitary District of Decatur for Nutrient Removal Planning, Design Criteria generation, Design Administration, Watershed management and general NPDES Permit compliance items related to milestones for meeting permit target dates.

The schedule published in the RFQ follows the following timeline:

PRE-SUBMITTAL CONFERENCE	<del>06/08/21</del>	Completed
RFQ'S DUE	<del>07/16/21</del>	Completed
REVIEW SUBMITTED RFQ'S	<del>07/19 thru 07/30</del>	Completed
SCHEDULE/ COMPLETE PROPOSAL INTERVIEWS	<del>08/09 thru 08/20</del>	Completed
MAKE SELECTION	<del>08/24/21</del>	Completed
AWARD CONTRACT	10/20/21	

Staff received a first draft of scope of work from B&V on this project and provided comments back. A follow-up video conference was held on 9/9/21 to review those comments and provide additional direction to them in preparing the next draft of the scope of work.

**DESIGN: Fermentation Reactor – Black and Veatch**

Design Kickoff Meeting	<del>03/10/21</del>	Complete
Preliminary Engineering Assessment	<del>05/10/21</del>	Complete
30% Design Submittal/Review	<del>06/21/21</del>	Complete
90% Design Submittal/Review	08/19/21	
Final Design Submittal	08/27/21	

60% drawing review was performed this last week. I expect a 90% set of drawings to arrive this on schedule.

**STUDY: Regionalization Planning – CMT Engineers**

In March 2021 SDD entered into an agreement with Crawford Murphy and Tilly Consulting Engineers (CMT) for investigating regionalization opportunities to the West of the SDD Main Treatment facility; ranging from approximately I-72 to Route 121. Finishing touches are being performed on the report and should be completed shortly.

**DESIGN: Decant Upgrades Wyckles Facility – East Lagoon**

This project is to improve the decanting operation in the East Lagoon. With the East Lagoon emptied, this is the time to perform this modification.

This project was advertised on 8/24/21 and we expect to open bids on 9/21/21. There is currently one contractor and two plan houses holding plans for this work.

**STUDY: East Headworks Grit Flow Modeling – Clemson Engineering Hydraulics**

<<No Update>> This effort is to model the flow of grit through the east primary headworks. Dr David Werth of Clemson Engineering is the hydraulic modeling expert that worked with SDD through the effluent pump station flow issues. The district experiences imbalanced grit loading through this structure and with the West Headworks upgrades is desiring to address the imbalanced grit load. This modeling effort is expected to be around \$30,000.

Sept 15, 2021

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**STUDY: Performance of Aeration Basin Diffusers**

Staff has engaged Redmon Engineering (Racine Wisconsin) to characterize the oxygen transfer performance in the existing aeration basins. The analysis measures the amount of air delivered to the basins at various locations and compares that to the amount of air that leaves the basin at those same locations. The method is known as the “Off-gas method” and is used to measure Oxygen Transfer Efficiency (OTE). This is a preliminary look to determine if further investigation into the diffuser performance is necessary. Note that our EPDM diffusers typically begin dropping off performance at 3 years and the ones we currently were installed in 2014/15.

**UPCOMING PROJECTS:**

**Effluent Pump #03 Replacement:** Staff is beginning to prepare project plans to replace the third effluent pump. This is the last of 3 pumps that we are converting to VFDs which replaces 3 of the 5 original Flygt pumps in the station. Trustees approved the purchase of this pump on Aug 18, 2021 and a PO has been issued for its procurement.

**Replacement of Sludge Transfer Pump:** <<No Update>> Staff is preparing plans for the procurement and installation of a replacement transfer pump. This pump moves sludge from the main treatment plant to the Wyckles Facility.

**Sodium Bisulfite Tank Replacement:** <<No Update>> Development of project plans to replace the two sodium bisulfite tanks is ongoing.

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**INTERGOVERNMENTAL ACTIVITIES**

None

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**PROPOSED BOARD ACTION**

For the Board’s consideration from the Engineering Dept this meeting:

1. None

If there are any questions, please contact me by telephone at 422-6931 ext 216, or by email at [DonM@sddcleanwater.org](mailto:DonM@sddcleanwater.org).



# Memorandum

Date: September 2, 2021

To: Donald B. Miller, P.E., Director of Engineering

From: Will Gray, P.E., Donohue & Associates

Re: Project Status Report  
2020-07 Digester Improvements Project  
Donohue Project No. 13782

## 2020-07 Digester Improvements Project

- Weekly job progress meetings are being held monthly on the last Thursday of the month.
- Christy-Foltz has identified coating failures inside both digester #2 and #3, with the failures in #2 being more prevalent than those inside #3. C-F to remove the failed coatings back to a solid edge as a T&M change order (RFPCO #002). C-F has removed the failed coatings from within Digester #2, Digester #3 is pending.
- Christy-Foltz is halfway done with dismantling the lid on Digester #3. They are removing the trusses. They will be assembling scaffolding to support the center ring in the coming weeks.
- Christy-Foltz has removed all the brick on Digester #2 and #3. Ridgelok panels for Digester #2 have been installed. Panel installation on Digester #3 to happen after exterior concrete wall repairs are complete.
- The exterior concrete wall repairs are complete on Digester #2, C-F is working on repairs on Digester #3 and expect them to be complete at the end of this week. This work is being paid for as a T&M Change Order (RFPCO #003).
- As of the date of this report, WesTech has STILL not submitted the digester lid shop drawing. Another conference call with WesTech has been scheduled to try and speed them along.
- Change Order #1 will be issued later this month and will contain RFPCO #002 and #003.
- RFPCO#001 – Brick Recycling was rejected by the District.
- RFPCO #002 – Coating Repair is proceeding as a T&M change order.
- RFPCO #003 – Digester Wall Repair is proceeding as a T&M change order.
- RFI #006 – Digester #3 Manway Repair
- Stewart Spreading Additional Pumping

Updated: 9-02-2021	Open	Closed	Total
Submittals	0	6	6
RFI	0	6	6
Change Order Request	4	1	5
Change Orders	0	0	0

September 1, 2021

Sanitary District of Decatur  
501 Dipper Lane  
Decatur, IL 62522

Attn: Don Miller, Director of Engineering

Re: 20-06 South Shores Rehab  
Project Status Report

Dear Don:

We are pleased to provide the following project status summary for the current project that Farnsworth Group is currently working on for the District. Our most recent monthly invoice for work on this current project is attached for your consideration.

**1. 20-06 South Shores Sewer Rehab (L17-5456):**

- A. Construction – the cleaning and televising work for the first segment of main between S. Main St. (Bus 51) west to the St. Louis Bridge Pump Station has wrapped up and the Contractor plans to begin lining this segment starting next week (9/6/21). The Contractor has been setting up the bypass piping to perform this lining work. Shop drawing submittals and review are ongoing along with review of the Contractor's Pay Application #2.
- B. As of this Project Invoice #10 (Invoice No. 227576), we have billed \$112,331.75 to date on this project which is 54% of the total estimated fee of \$207,800.

If you have any questions or need any additional information regarding the status of this project, please feel free to contact me any time. Thanks.

Sincerely,

FARNSWORTH GROUP, INC.

Kevin N. Hannel, PE  
Engineering Manager